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Report of the Technical Workshop on Selecting Indicators for the Stat of Regional Seas, 30 June – 2 July 2015, Geneva

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I. BACKGROUND

1. UNEP Regional Seas Programme was launched in 1974. In each of the 18 regional seas (Black Sea, Wider Caribbean, East Africa, East Asia, ROPME sea area, Mediterranean, Northeast Pacific, Northwest Pacific, South Pacific, Red Sea and Gulf of Aden, South Asia, South East Pacific and West ,Central and Southern Africa), a regional seas programme was established and is under implementation. Antarctic, Arctic, Baltic Sea, Caspian Sea and Northeast Atlantic are regional seas associated with the UNEP Regional Seas Programme. For each of these regional seas, an action plan serves as the basis for regional cooperation and regionally coordinated action to address the issues related to and prioritised in the marine and coastal environments of these seas. Many of the regional seas programmes continue to assess the state of the marine environment on a regular basis, and recently more effort has been made to connect the regional state of the marine environment reporting with the Global Ocean Assessment processes. Different regional seas carried out the state of the marine environment reporting based on different methodologies, and introduction of key indicators for the purpose of assessing the state of the marine environment is observed in some of the regional seas programmes.

2. A limited number of regional seas programmes clearly set the ecosystem-based objectives or in a limited number of cases, regional targets, which the member countries collectively endeavour to achieve. In relation to the proposed approach: Ecosystem Approach to Regional Seas (UNEP/EARS/WG.1/INF.3), UNEP proposed to establish a set of indicators, from which the regional seas programmes can withdraw and decide in order to track down the chronological changes of the status of marine and coastal environment. The regional seas programmes are also urged to set their own regional ecosystem based management objectives or even targets to achieve through their collective efforts. In order to measure the progress in the achievements in the ecosystem-based objectives and targets, another set or the similar set of indicators may be used.

3. On a global scale, the UN member states are proceeding with the World Ocean Assessment (also referred to as the regular process)[1], but the currently developed assessment is narrative-based assessment based on the existing and emerging literature. It is expected that chronological changes will be monitored based on the indicators in the follow-up Regular Process. UNEP has developed a set of indicators for the Transboundary Waters Assessment Programme, targeting Large Marine Ecosystems and Open Ocean, but there are difficulties for the regional seas programmes to take them up in their own assessment and management efforts. Based on the Rio+20 Outcome document: *The Future We Want*, the international community started discussing the Sustainable Development Goals (SDGs) and how to measure their achievements through possible application of indicators. Many of the indicators already developed through some of the regional seas programmes would contribute to the discussion of the marine and ocean related SDGs development and indicators associated with them.

4. Based on the UNEP Regional Seas Strategic Directions[2], and following the Ecosystem Approach to Regional Seas programme, UNEP is proposing that the Regional Seas programmes agree on a set of core indicators and another set of supplementary indicators, so that each of the regional seas programmes can mainstream these indicators within their assessment and monitoring programmes and they can report on the indicators regularly to the UNEP Regional Seas Programme

[1] www.worldoceanassessment.org
[2] www.unep.org/egionalseas/globalmeetings/default_ns.asp

for its compilation. Such a mechanism should be closely linked with the UNEP-Live[3], which is UNEP's flagship data and information management programme.

5. As the starting point, UNEP already prepared a report (UNEP/EARS/WG.1/2) reviewing the ecosystem-based indicators and index for regional seas by: (i) collecting and collating information on the ecosystem-based indicators and index used for the state of the marine environment reporting and tracking down the achievements of regionally agreed, ecosystem-based objectives and targets; (ii) analysing these indicators to find common elements to be used for continuing regional state of the marine environment reporting in order to formulate recommendations to the ongoing discussion on the global state of the marine environment reporting, such as Transboundary Water Assessment[4] and Global Ocean Assessment; and (iii) proposing a set of indicators and the scientific background to use such indicators, from which each of the regional seas programme can adapt and adopt its sub-set as the indicators for their own state of the marine environment and tacking down the achievement of their management objectives/targets. The report was being finalized for publication.

6. The results of the review and recommended indicators were submitted as UNEP input to the Sustainable Development Goals discussion as well as the technical discussion on the future direction of the Global Ocean Assessment to form a basis for regionally-based target monitoring and assessment. An assessment framework will also be proposed to monitor the overall achievement of the Global Partnership for Oceans[5], which the World Bank is spearheading.

7. In order to discuss possible sets of indicators for the state of regional seas, UNEP organised a technical workshop on selecting indicators for the state of regional seas, 30 June – 2 July 2014, in the International Environment House 2, Geneva , Switzerland. The programme of the workshop is included in ANNEX I. The list of participants is found in ANNEX II.

8. The workshop was conducted in English and moderated by Mr. Takehiro Nakamra (UNEP). The list of documents used and presentations is annexed to this report (ANNEX III). The report was compiled and prepared by UNEP based on the presentations and results of the breakout groups.

II. OPENING OF THE WORKSHOP

9. The workshop was opened by Ms. Nena Schneider, who delivered her statement on behalf of Regional Director and Representative for Europe of the United Nations Environment Programme (UNEP) at 0900 Hrs. on 30 June 2014. She welcomed the participants to Geneva and outlined the UNEP activities leading to this Workshop.

10. Mr. Takehiro Nakamura, UNEP, made a presentation, introducing the UNEP draft report: Review of ecosystem-based indicators and indices on the state of the Regional Seas (UNEP/EARS/WG.1/2), and outlined the proposed objectives of the workshop as follows:

    (i) to have an overview of existing and planned indicators for regional seas (regional seas programmes under UNEP coordination, Global Environment Facility (GEF) International Waters Large Marine Ecosystem (LME) projects, regional components of global ocean assessments, and other thematic regional ocean assessments); and

    (ii) to preliminarily discuss a core set of indicators and supplementary set of indicators together with their scientific background and possible data sources and future monitoring.

[3] www.unep-live.org
[4] www.geftwap.org
[5] www.globalpartnershipforoceans.org

III. PRESENTATIONS BY REGIONAL SEAS AND REGIONAL INITATIVES

11. Participants from the regional seas programmes and other regional initatives/projects made presentations on their indicator initiatives and other relevant activities. The following programmes made presentations: Caribbean Environment Programme (Cartagena Convention), Regional Organisation for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA), Black Sea Commission, Northwest Pacific Action Plan (NOWPAP), Secretariat of the Pacific Regional Environment Programme (SPREP), East African Seas (Nairobi Convention), South Asian Seas hosted by South Asia Co-operative Environment Programme (SACEP), Helsinki Commission, West, Central and Southern Africa (Abidjan Convention), Mediterranean Action Plan (Barcelona Convention), Tehran Convention (interim) Secretariat (Caspian Sea), Gulf of Mexico LME project, Caribbean LME project, European Environment Agency (EEA), International Council for the Exploration of the Seas (ICES) and North Pacific Marine Science Organisation (PICES). All these and other presentations can be found in www.unep.org/globalmeetings/Indicator_RS_meeting/indicator_workshop.asp.

IV. PRESENTATIONS BY GLOBAL INDICATOR INITIATIVES

12. Two global indicator initiatives were presented: (i) Biodiversity Indicator Partnership by UNEP World Conservation Monitoring Centre (WCMC); and (ii) Transboundary Waters Assessment Programme (TWAP) by UNEP TWAP Project Manager and the coordinator of the TWAP Large Marine Ecosystems Component, which is executed along with the Open Ocean Component by the International Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organisation (IOC/UNESCO).

V. GENERAL DISCUSSION

13. Discussion on the regional seas indicators were made.

14. Many regional seas programmes expressed their support for this initiative but expressed their concern about the overall objective of this initiative and slow progress.

15. Many regional seas programmes reported that indicators could be useful in carrying out the state of the marine environment reporting, reporting of the implementation of the Convention and Protocols, and setting management objectives. However, currently some regional seas programmes actually introduced indicators to their programmes with typical examples of Helsinki Commission, Mediterranean Action Plan and OSPAR Commission. Few regional seas programmes were currently using indicators for monitoring the achievements of agreed management objectives in the action plans and strategic action programmes. A number of them indicated that they were in the middle of setting indicators and urged UNEP to coordinate regional seas indicators as early as possible. Most indicators established by regional seas relate primarily to process indicators.

16. Many of the regional seas programmes already adopted the ecosystem approach or ecosystem-based management as principles of their management. However, it was not very clear how the introduction of these principles affected the way they implement their programmes. Further, how the introduction of the ecosystem approach affects the state of the marine environment reporting was not clearly demonstrated with few good examples in regional seas programmes where the European Union Marine Strategy Framework Directive (MSFD) affects their programme implementation. Some requested that UNEP lead the development of clear guidelines for the introduction of the ecosystem approach to regional seas further to the UNEP paper (UNEP/EARS/WG.1/INF3) in which use of ecosystem-based indicators are conceptualized.

17. The introduction of ecosystem services associated with coastal and marine ecosystems in the regional seas assessment and management had been started but not fully realized. A clear methodological development is needed for the regional seas programmes to introduce the concept of ecosystem services and their values in their assessment and decision making.

18. Almost of all the regional seas programmes already introduced the Driver-Pressure-State-Impact-Response (DPSIR) framework in their assessment framework. Some participants reported recent development introduced to the DPSIR, particularly replacing the Impact with Benefit or Welfare. However, when further considering the regional seas indicators, the participants agreed to use the DPSIR framework or any recent modifications to it.

19. Many regional seas programmes considered that the value of using indicators was that they could convey information and messages to decision makers not only in the languages that are easily understandable and easily translatable for decision-making but more importantly information that is actually requested by them. For this purpose, a rigid but practical scientific basis should be established for establishing and choosing indicators. Further, indicators on Responses can be more used while impact related indicators are difficult to monitor.

20. It was clearly recognized that the objectives of developing indicators should be clearly identified from the onset.

21. For both the Biodiversity Indicator Partnership and TWAP LMEs component a number of specific questions were identified to be answered for which indicators are useful, and through which the objectives and usefulness of use of indicators were clarified.

22. A question was raised as to why a core set of indicators applicable to all regional seas programmes is needed. After some discussion, it was agreed that the core set of indicators could be used for some regional seas programmes to develop new indicators and for other regional seas programmes to revise their existing and agreed indicators. The core set of indicators would be used by UNEP to facilitate its support to regional seas programmes for their data acquisition and quality assurance to compile reporting from the regional seas to produce global assessments to contribute to the ongoing global assessments such as WOA and TWAP and to the Global Environmental Conventions. A set of indicators coordinated among the regional seas programmes was also proposed and discussed.

23. Some participants identified Global Ocean Observing System to be a global observing system where the regional seas programmes may link their initiatives for their indicator-based assessment.

24. It was clearly recognized that different regional seas programmes have different marine and coastal issues and varied data and assessment capacities. It was therefore suggested that a widely applicable indicator toolbox should be developed from which the regional seas programmes could select appropriate indicators to suit their needs, rather than a strictly defined core set of indicators. Also discussed is coordinated set of indicators among the regional seas.

25. Data collection and their quality assurance are important issues in setting and applying indicators. Availability of the data (measurement, national estimates, etc.) at national/local level is limited and many look at data produced from modeling for global purpose. The QA/QC process to be applied will not be the same. Global datasets may be of assistance, but the regionally available scientific and technical capacities, data and information should be the basis for setting and applying indicators. Global datasets should be underpinned by regional data and regional datasets should be underpinned by national or subnational data.

26. Many of the regional seas developed or are moving towards developing ecological quality objectives, ecological objectives and/or good environmental status. Indicators are needed to measure the progress in achieving the objectives or targets of their Action Plans, Conventions and Protocols. One participant felt that no good example of indicators was presented that could be adopted for the state of the marine environment reporting and for the measuring progress in Regional Seas. In response, it was pointed out that it is important to distinguish between the indicator (what is being measured) and the underpinning data - the indicator is measurable at any geographic scale from global to sub-national, etc. Further, the type of indicators selected depends on the purposes for which they are to be used. For example, in the GEF funded LME projects, indicators are identified for monitoring the achievements of the objectives of the strategic action programmes (SAPs). SAP targets were being now assessed in some cases, such as the process in the Mediterranean. However, SAP focused more on targets and activities, and indicators are not properly incorporated into the SAP implementation.

27. A linkage between the regional seas indicators and national level reporting was also discussed. Regional seas member countries or parties to regional seas conventions are supposed to report to regional seas programmes and global multilateral environmental agreements (MEAs). Regional seas indicators should be supportive of and complementary to their national reporting, including national biodiversity strategy and action plans under the Convention on Biological Diversity and national communications under the United Nations Framework Convention on Climate Change, among the others. Regional seas indicators should give as little additional burden to their member countries or parties in their reporting as possible. Regionally harmonized indicators may assist the member countries or parties.

28. Issues of geographical scale and timing of reporting of indicators were discussed. The indicators concerned should be on a regional sea scale, while national level information and reporting would play an important role. Harmonisation of timing of application of indicators would be difficult among the regional seas programmes although there used to be a coordinating state of the marine environment reporting earlier coordinated by UNEP and there would be possibly more coordinated regional seas contribution to the future WOA.

29. Satellite data and physical and numerical models should support harmonized indicators.

30. Some participants indicated the importance of setting indicators on regional ocean governance.

VI. BREAK-OUT GROUP DISCUSSION

31. Four break-out groups were formulated, respectively discussing indicators on: (i) marine ecosystems, including fish and human impacts on them (led by Mr. Damon Stanwell-Smith of WCMC); (ii) pollution and its sources and water quality (led by Mr. Vincent Sweeney of UNEP); (iii) impacts of climate change and variability and other global changes (led by Mr. Pascal Peduzzi of GRID-Geneva); and (iv) socio-economic indicators led by Ms. Liana McManus of TWAP/UNEP). General guidance was provided to the groups through UNEP/EARS/WG.1/INF6.

32. It was agreed that the groups would start the discussion to identify questions to be answered by applying indicators. After identifying the questions, each group would identify possible indicators or the areas indicators could cover. With the exception of the socio-economic group, an initial priority was given to state and pressure indicators while recognizing the importance of response indicators. The groups would not reach filling out two tables presented in the guidelines (UNEP/EARS/WG.1/INF6) and would not differentiate core and supplementary sets of indicators.

33. The results of the break-out group discussion are presented in ANNEX IV.

VII. PRESENTATION BY INTERNATIONAL ORAGNISATIONS

34. Participants from international organisations made presentations: Food and Agricultural Organisations of the United Nations, International Atomic Energy Agency, European Environment Agency, and GRID-Geneva. Their presentations specifically mentioned how their programmes can support the initiatives of the regional seas in setting their indicators. Also UNEP (TWAP) and IOC-UNESCO (TWAP)

VIII. WAY FORWARD

35. It was agreed that a working group would be formed among the regional seas programmes and other supporting organisations willing to assist this process. The working group would work through e-mail and virtual communications, and would meet when financially feasible. The objective of the working group is to develop and agree on a conceptual guide on the introduction of ecosystem approach and associated indicators to regional seas, to develop and agree on a set of indicators to be used by regional seas in the form of an indicator toolbox. Where there are needs, the working group would develop a guidance materials on developing ecosystem based objectives and goals associated with global and other regional goals and objectives. UNEP would take the lead in the organization and carrying out the work of the working group.

36. It was recommended to develop a conceptual framework on the introduction of the ecosystem approach to regional seas and ecosystem-based indicators. Global and regional organisations are taking similar ecosystem-based approaches, and it was recommended that the regional seas programmes would also have a common understanding of incorporating the ecosystem approach in their programmes. Such a conceptual framework would include the objectives and purposes of introducing ecosystem-based indicators in relation to the member countries' and parties reporting on the regional seas status to regional and global environmental agreements and processes.

37. A recommended set of indicators for use by regional seas programmes would be developed by the working group. The set would form a basis for regional seas programmes to adopt or revise their own regional seas indicators based on their defined objectives for their use. The working group would also discuss if a core set of indicators for all regional seas programmes to use could be agreed upon among them.

38. The working group would base its activities on the UNEP indicator report and the results of the discussion during the present workshop and discussing results expressed in its report. Its work would be reported to regional seas programmes on appropriate occasions.

39. Data and information, as well as regional capacities, should form a crucial basis for the indicator work, and it was agreed that an inventory of marine and coastal data sources should be developed. Further capacity support should be provided within this indicator initiative, particularly based on the global programmes such as UNEP-Live and WOA.

40. ICES and PICES expressed their possible support to this initiative and expressed their willingness to support future work within their mandates, particularly intellectual input to the process. FAO and IAEA both indicated that these two organisations were already working with UNEP on mutual support and the scope of the cooperation should include support to the regional seas indicator initiative.

IX. CLOSING OF THE WORKSHOP

41. Ms. Jacqueline Alder, on behalf of UNEP, delivered the closing statement, thanking all the participants for their active engagement and input and officially closed the workshop at 1600 Hrs. on 2 July 2014.